

Georgia Department of Natural Resources

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

Permitting, Compliance and Enforcement Program

4244 International Parkway, Suite 110

Atlanta, Georgia 30354

404/362-2680

FAX 404/362-2691

OK

December 30, 1998

Mr. Howard Shelnutt
Environmental Specialist
Georgia Power Company
Bin 10221
241 Ralph McGill Boulevard, N.E.
Atlanta, GA 30308-3374

RECEIVED

JAN 08 1999

ENVIRONMENTAL AFFAIRS

RE: Georgia Power Company - Plant Scherer
NPDES Permit No. GA0035564

Dear Mr. Shelnutt:

This will acknowledge receipt of the Best Management Practices (BMP) Plan Revision 1.1 dated August 26, 1998, addressing the use of biocides to control macrofouling in cooling tower and service water systems at Plant Scherer.

We have reviewed this Revision 1.1 and find it to conform to Part III. B. 4 in the Special Conditions section of the permit. It is approved as a replacement for Revision 1.0 dated June 10, 1995 and approved October 16, 1995.

Monitoring and reporting should continue as specified in the permit. If you have any questions, please call Tom Hopkins at 404-362-4916.

Sincerely,



Michael S. Creason, P.E.
Unit Coordinator
Industrial Wastewater Unit

MSC:sdmj

Sin 10221
241 Ralph McGill Boulevard NE
Atlanta, Georgia 30308-3374



September 28, 1998

Mr. Tom Hopkins
Georgia Environmental Protection Division
Permitting, Compliance, and Enforcement Program
4244 International Parkway, Suite 110
Atlanta, GA 30354

Dear Mr. Hopkins:

In accordance with Part II.B.13 and Part III.B.4, and Part III.B.11 of the Plant Scherer NPDES permit, attached is the revised Best Management Plan (BMP) that addresses the use of biocides to control macrofouling and biofouling in the plant's cooling water systems. Please note that the revision is highlighted in red. We request that the Division review the plan and provide written confirmation of your acceptance decision. Upon approval by the Division, the plan will be incorporated into the Plant Scherer NPDES permit.

If you have any questions, or require additional information, please contact Howard Shelnutt at 404-506-7058.

Sincerely,

M. E. Wilder
Environmental Program Manager

1441

BEST MANAGEMENT PRACTICES PLAN
PLANT SCHERER
NPDES Permit No. GA 0035564

Macrofouling and Biofouling Control
Revision 1.1
August 26, 1998

1.0 INTRODUCTION

1.1 Basis

This BMP has been developed in accordance with Part II.B.13, Part III.B.4, and Part II I.B. 11 of the plant's NPDES permit. This BMP addresses the use of biocides to control macrofouling and biofouling in the plant's cooling water systems. Upon approval by the Division and implementation by the plant it will become part of the NPDES Permit for the site.

1.2 Plant Site

Plant Scherer is composed of four generating units with a combined nameplate rating of 3272 Megawatts. All units are currently in commercial operation. Cooling water and service water for all units are provided from Lake Juliette. All units utilize closed cycle condenser cooling. The main unit cooling water flow is 260,000 gpm per unit. A fraction of the flow is discharged as blowdown. The average blowdown flow is 6,791 gpm per unit. This discharges into a holding basin with the service water discharge of 2,500 gpm and the Recycle blowdown of 10,600 gpm. Bulk water capacity of each unit's cooling tower system is 4.2 million gallons.

2.0 PROBLEM DESCRIPTION

2.1 Macrofouling

Various organisms can cause severe problems in generating plant water systems, depending on the plant geographic location, prevailing local conditions, and plant specific design factors. The Asiatic clam (*Corbicula fluminea*) is capable of blocking small heat exchanger tubing and even plugging larger diameter pipes with low flow velocities. Furthermore, once the organism is dead the relic shells can still cause blockages. Due to its life cycle, adaptability, and resistance to control methods it is extremely difficult to eliminate from water systems once it becomes established. Current control methods include use of biocides, physical cleaning of affected piping, straining of intake water, and heat treatment. Each of these control methods has limitations on effectiveness,

Slime and algae growths have always been a problem in cooling water systems. The biological growths tend to entrain silt and clays which further foul the surface and will in turn provide more substrate for biological growth. The weight of this type of fouling has caused the failure, and collapse of cooling tower fill. Reduced cooling efficiency penalizes the operation of steam turbines.

Concern is growing over the likely invasion of the Zebra mussel (Dreissena polymorpha). Experience at other utilities as the organism continues its spread prove that control is extremely difficult with conventional methods and is not entirely successful. Once attached to the substrate, the mussel is not dislodged and may become the host substrate for future colonization. This leads to further blockage of the cooling system.

2.2 Site Problem

Plant Scherer has biofouling problems with slimes, algae, and the Asiatic clam. They are known to be present in the cooling water source. Algae and slimes are believed to be the dominant causes of blockage in the cooling tower fill bundles. The clams are often found in plant systems (i.e. oil coolers, auxiliary heat exchangers, low velocity piping, etc.). It is obvious that the plant is subject to infestation and is in need of a control program.

3.0 CONTROL PROGRAM

3.1 Use of Biocides

While physical and mechanical methods of control will still be employed routinely to reduce the effects of biofouling, routine treatments of biocide will likely be required to maintain efficiency of heat exchangers. An oxidizing biocide such as chlorine has long been the biocide of choice because of its proven effectiveness, ease of application and cost. Increasing restrictions on the use, storage and handling of chlorine have prompted us to seek alternate control methods. Additionally, oxidizing biocides increase the rate of corrosion in copper bearing metals which are common in heat exchangers.

Nonoxidizing biocides, such as quaternary amines, have been found to be effective on certain organisms. Quaternary amines are also effective on algae. Other advantages of the nonoxidizers are reduced frequency of application and ready adsorption of the active ingredient onto mud, silt and clay which exhausts the toxicity.

3.1.1 Service Water Routine Biological Control

Chlorine will be used for routine control of microbiological growth in the service water systems. Chlorine will be fed intermittently throughout the year to maintain control.

3.1.2 Service Water Asiatic Clam/Zebra Mussel Control

Chlorine will be used for seasonal control of Asiatic clams and Zebra mussels in the service water systems. Chlorine will be utilized as referenced in the facility NPDES Permit Part III.B.4.

3.1.3 Cooling Tower Routine Biological Control

Either an oxidizing or a nonoxidizing biocide will be used to control the growth of slime and algae in the cooling tower systems. If necessary, both types of biocide programs may be fed to maintain unit performance. The primary program will be Betz Powerline 3625 or an equivalent, a nonoxidizing biocide containing the quaternary amine ADBAC (n-alkyl dimethyl benzyl ammonium chloride). The secondary program will be chlorine, either gaseous or liquid.

3.2 Application Rates and Injection Points

3.2.1 Service Water Routine Biological Control

As a general rule, chlorine will be fed to the main service water headers just downstream from the pump intake bay. The biocide will be fed to each service water system (Units 1 & 2 and Units 3&4) to achieve a minimum free residual oxidant level of 0.2 ppm. Applications will normally be daily for one hour when the water temperature is above 60° F and three times per week for one hour during winter months. It is anticipated that one hour of biocide application will be sufficient to control biological growth, but it may be applied for up to two hours.

3.2.2 Service Water Asiatic Clam/Zebra Mussel Control

Chlorine will be fed to the service water headers as above. Each service water system (i.e. Units 1 & 2 and Units 3&4) will be treated independently in order to insure there is no toxicity in the discharge streams. (Reference Part III.B.4.)

3.2.3 Cooling Tower Routine Biological Control

The nonoxidizing biocide will be fed to the cooling tower basin. Biocide dosage and frequency will vary based on seasonal conditions and system demand, ranging from 2 to 7.5 ppm active quaternary amine. Feed frequency will range from one to three times per week, as needed. Cooling towers will be treated independently so that there will be no simultaneous discharge of the biocide.

As an alternative, chlorine will be fed to the cooling water in place of or in addition to the nonoxidizing biocide. Chlorine dosage and frequency will vary based on seasonal conditions and system demand.

3.3 Elimination of Biocide From Systems

3.3.1 Service Water Routine Biological Control Program

The biocide program proposed will not require any detoxification.

3.3.2 Service Water Asiatic Clam/Zebra Mussel Control

The biocide program proposed will not require any detoxification.

3.3.3 Cooling Tower Routine Biological Control

During nonoxidizing biocide feed the cooling tower blowdown will be closed and will remain closed until tests show that the product concentration in the tower basin is below the detection limit of .05 ppm. A bentonite clay solution will be kept on-hand to allow for detoxification of any inadvertent overflow. When chlorine is used for biocide treatment, the discharge from the cooling tower will be controlled as currently limited in the NPDES permit for the site.

3.4 Effects in System

3.4.1 Routine Service Water Treatment

Microbiological growth in the service water coolers and heat exchangers will be minimized, thereby improving overall heat transfer and cooling efficiency. Reduced microbiological growth in the service water systems will also improve microbiological control in the systems supplied by service water, including the water treatment plants and cooling towers.

3.4.2 Asiatic Clam/Zebra Mussel Treatment

Macrofouling organisms will be eliminated throughout the water system treated. This will reduce maintenance requirements and enhance heat exchange efficiency.

3.4.3 Cooling Tower Treatment

Algae, slime and microbiological growth will be minimized throughout the cooling tower systems, resulting in improved condenser performance and reduced plugging of the tower fill.

3.5 Other Biocides and Methods of Control

It is expected that this method of treatment and control will be fully effective in controlling the biofouling experienced by this plant. However, implementation of this plan does not preclude the use of other biocides or control methods if they are shown to be equally beneficial. This plan will be revised in accordance with Section 7.0 if other biocides are found to be necessary.

4.0 MONITORING PROGRAM

4.1 Sample Collection

4.1.1 Routine Service Water Treatment

Samples will be collected from the service water system consistent with the facility NPDES permit.

The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.

4.1.2 Asiatic Clam/Zebra Mussel Treatment

Samples will be collected from the service water system consistent with the facility NPDES permit.

Final plant discharge chlorine levels will not exceed limits as set in the existing NPDES permit.

The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.

4.1.3 Condenser Cooling Water Treatment

When a quaternary amine biocide is used, concentration will be measured at two to four hour intervals. No discharge will be allowed if the concentration is in excess of 0.05 ppm.

The analytical method for determining concentration of the nonoxidizing biocide is the Betz Clam-Trol CT-2 Methyl Orange Method. The detection limit (MDL) for this method is 0.05 ppm as Powerline 3625 (0.025ppm active ADBAC quat). Other analytical methods, which meet or improve the (MDL), may be utilized without modification of this plan. The Division will be notified of any change in analytical methods. QA/QC data such as instrument calibration curves and instrument maintenance records will be retained for review by the Division.

In the event of an inadvertent overflow, the bentonite clay product will be added and samples will be collected once per hour at the plant discharge to insure the biocide is not detectable.

4.2 Reporting of Monitoring Results

Biocide concentration in the service water systems and cooling tower basins will be measured and recorded each date that they are treated, as outlined in Section 4.1. Results from samples representative of the discharge will be reported on the NPDES Quarterly Operation Monitoring Report (OMR) in a suitably concise format. Results of operational analyses will be retained for twelve months and will be available for review by the Division.

4.3 Equipment Inspections

To evaluate the effectiveness of the control programs, the main condensers, auxiliary coolers and systems treated will be periodically inspected for the presence of microbiological growth and macrofouling organisms or relics of organisms.

5.0 OPTIMIZATION PROGRAM

5.1 Equipment Maintenance

All associated equipment and monitoring instruments will be maintained in proper operating conditions at all times.

5.2 Biocide Usage

The amount of biocide used will be re-evaluated periodically to determine if lesser amounts can be effectively utilized. This determination will be based on the results of plant inspections, information from other facilities, plant performance data and the current scientific literature. If it appears that lower concentrations can effectively control fouling in the systems, then concentrations will be reduced accordingly and more intense inspections will be performed to document the effectiveness. If fouling is found subsequent to any reductions the concentrations may be increased to the initial levels.

6.0 NPDES PERMIT CONDITIONS

6.1 Incorporation of BMP into Permit

Upon approval by the Division and implementation by the plant, the plan will be incorporated into the NPDES Permit for the facility.

7.0 REVISIONS

7.1 Revising the BMP

This BMP may be revised if necessary. The Plant Manager must approve the revision. A copy of the revised plan will be furnished to the Manager of Environmental Affairs. The Environmental Protection Division must approve any revision prior to implementation.

Approved for implementation:

Date 8/31/98

Plant Manager 

PLANT SCHERER
ASH POND COTREATMENT
SUMMARY TABLE

A) DRY WEATHER (PROCESS) FL((Maximum Flows used)

Coal Pile + Waste Water Basins Units 1 thru 4 + No.1 STP	29.28 MGD	20330 GPM
Ash Transport Water 100% Recycle	0 MGD	0 GPM
Total Dry Weather (Process) Flow	29.28 MG	

B) RAINFALL RUNOFF (Using SCS Method)

Watershed Runoff	312.5 Acres	
Ash Pond Surface	490.0 Acres	
Total Runoff Area	802.5 Acres	
10-year, 24 hour storm	5.8 inches	
Annual Rainfall	49.76 inches	(0.136 inches/day)
TOTAL Rainfall Runoff	97.49 MG	

C) REQUIRED WATER VOLUME

(A)Dry Weather Flow + (B)Rainfall Runoff = 126.77 MG OR 627,615 CY

D) ASH POND REMAINING STORAGE (Strict Interpretation, See Note 2)

From Ash Management Projections 1996 -2000 (NO Sales)

Pond life on 12/31 at water surface elevation 494.5

YEAR	2002	2003	2004	2005	2006	2007
CU YDS	15,960,700	15,130,700	14,282,700	13,416,700	12,532,700	11,630,700
MG	3223.9	3056.3	2885.0	2710.0	2531.5	2349.3

E) AVAILABLE WATER VOLUME on 12/31/2007

See (D) Above 2349.3 MG OR 11,630,733 CY

FROM ABOVE, (E) IS GREATER THAN (C), THEREFORE ASH POND CAPACITY IS SUFFICIENT

NOTES:

1. The rainfall runoff was determined using the Soil Conservation Service (SCS) Method and Georgia Manual for Sediment and Erosion Control, 2000 edition.
2. Strict Interpretation uses elevation 494.5, which represents the top of the discharge structure elevation (min. discharge elevation), see plant drawing EIC3444.

Georgia Department of Natural Resources
GEORGIA ENVIRONMENTAL PROTECTION DIVISION
Permitting, Compliance and Enforcement Program
4220 International Parkway, Suite 101
Atlanta, Georgia 30354
404/362-2680
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July 31, 2000

RECEIVED

AUG 03 2000

ENVIRONMENTAL AFFAIRS

Mr. M. E. Wilder
Land and Water Resources Manager
Georgia Power Company
Bin No. 10221
241 Ralph McGill Blvd
Atlanta, Georgia 30308-3374

RE: NPDES Permit No. GA0035564
Georgia Power Company - Plant Scherer
Notice of Change in Discharge

Dear Mr. Wilder:

We have received your May 30, 2000 notification regarding change in discharge per Part II.A.1.a. of the above referenced NPDES permit. We concur that the change in flow volume is within the scope of the existing permit. Outfall 11 (River Intake Pump Seal Water and Backwash) and shall be limited and monitored in accordance with Part I.A.9., page 10 of the NPDES permit. If you have any comments or questions, please contact Mr. Tom Hopkins at 404-362-4916.

Sincerely,



Michael S. Creason, P.E.
Unit Coordinator
Industrial Wastewater Unit

MSC:thh

GEORGIA POWER
SOUTHERN COMPANY

RE: Plant Scherer
NPDES Permit No. GA0035564
Notice of Change in Discharge

Pursuant to the provisions of Part II.A.1.a. of the referenced NPDES permit, Georgia Power submits notice to the Division of the anticipated increase in flow volume of Outfall Number 11, River Intake Pump Seal Water and Backwash, from 70 gpm maximum to 100 gpm maximum. There will be no change in the effluent limits specified in Part I.A.9 of the permit. Attached is a revised page 1 continuation sheet for Form 2C of the permit application to effect this change.

If you need additional information or have questions regarding this matter, please contact Bill Evans at 404-506-7031.

M. E. Wilson

Attachment

cc: Tom Hopkins, EPD Water Protection Branch, w/ attachment

Form Approved.
OMB No. 2040-0086
Approval expires 7-31-88

I. OUTFALL LOCATION

A. OUT-
FALL NO.
(list)

B. LATITUDE

C. LONGITUDE

D. RECEIVING WATER (name)

[illegible]

A. Attach a line drawing showing the water flow through the facility. Indicate sources of intake water, operations contributing wastewater to the effluent, and treatment units labeled to correspond to the more detailed descriptions in Item B. Construct a water balance on the line drawing by showing average flows between intakes, operations, treatment units, and outfalls. If a water balance cannot be determined (e.g., for certain mining activities), provide a pictorial description of the nature and amount of any sources of water and any collection or treatment measures.

B. For each outfall, provide a description of: (1) All operations contributing wastewater to the effluent, including process wastewater, sanitary wastewater, cooling water, and storm water runoff; (2) The average flow contributed by each operation; and (3) The treatment received by the wastewater. Continue on additional sheets if necessary.

[illegible]

OFFICIAL USE ONLY (effluent guidelines sub-categories)

BEST MANAGEMENT PRACTICES PLAN

Georgia Power Company – Plant Scherer

NPDES Permit No. GA0035564

Macrofouling and Biofouling Control

Revision 2.0

July 26, 2001

1.0 INTRODUCTION

1.1 Basis

This BMP has been developed in accordance with Part II.B.13, Part III.B.4, and Part III.B.11 of the plant's NPDES Permit. This BMP addresses the use of biocides to control macrofouling and biofouling in the plant's cooling water systems. Upon approval by the Division and implementation by the plant, it will become part of the NPDES Permit for the site.

1.2 Plant Site

Plant Scherer is composed of four generating units with a combined nameplate rating of 3272 Megawatts. All units are currently in commercial operation. Cooling water and service water for all units is provided from Lake Juliette. All units utilize closed cycle condenser cooling. The main unit cooling water flow is 260,000 gpm per unit. A fraction of the flow is discharged as blowdown. The average blowdown flow is 6,791 gpm per unit. This discharges into a holding basin with the service water discharge of 2,500 gpm and the recycle blowdown of 10,600 gpm. Bulk water capacity of each unit's cooling tower system is 4.2 million gallons.

2.0 PROBLEM DESCRIPTION

2.1 Macrofouling

Various organisms can cause severe problems in generating plant water systems, depending on the plant geographic location, prevailing local conditions and plant specific design factors. The Asiatic clam (*Corbicula fluminea*) is capable of blocking small heat exchanger tubes and even plugging larger diameter pipes with low flow velocities. Furthermore, once the organism is dead the relic shells can still cause blockages. Due to its life cycle, adaptability, and resistance to control methods it is extremely difficult to eliminate from water systems once it becomes established. Current control methods include the use of biocides, physical cleaning of affected piping, straining of intake water, and heat treatment. Each of these control methods has limitations on effectiveness.

Slime and algae growths have always been a problem in cooling water systems. The biological growths tend to entrain silt and clays, which further foul the surface and will in turn provide more substrate for biological growth. The weight of this type of fouling has caused the failure and collapse of cooling tower fill. Reduced cooling efficiency penalizes the operation of system turbines.

Concern is growing over the likely invasion of the Zebra mussel (*Dreissena polymorpha*). Experience at other utilities, as the organism continues its spread, prove that control is extremely difficult with conventional methods and is not entirely successful. Once attached to the substrate, the mussel is not dislodged and may become the host substrate for future colonization. This leads to further blockage of the cooling system.

2.2 Site Problem

Plant Scherer has biofouling problems with slimes, algae, and Asiatic clams. They are known to be present in the cooling water source. Algae and slimes are believed to be the dominant causes of blockage in the cooling tower fill bundles. The clams are often found in plant systems (i.e. oil coolers, auxiliary heat exchangers, low velocity piping, etc.). It is obvious that the plant is subject to infestation and is in need of a control program.

3.0 CONTROL PROGRAM

3.1 Use of Biocides

While physical and mechanical methods of control will still be employed routinely to reduce the effects of biofouling, routine treatments of biocide will likely be required to maintain efficiency of heat exchangers. An oxidizing biocide such as chlorine has long been the biocide of choice because of its proven effectiveness, ease of application, and cost. Increasing restrictions on the use, storage, and handling of chlorine have prompted us to seek alternate control methods. Additionally, oxidizing biocides increase the rate of corrosion in copper bearing metals which are common in heat exchangers.

Non-oxidizing biocides, such as quaternary amines, have been found to be effective on certain organisms. Quaternary amines are also effective on algae. Other advantages of the non-oxidizers are reduced frequency of application, and ready absorption of the active ingredient onto mud, silt, and clay, which exhausts the toxicity.

3.1.1 Service Water Routine Biological Control

Chlorine will be used for routine control of microbiological growth in the service water systems. Chlorine will be fed intermittently throughout the year to maintain control.

3.1.2 Service Water Asiatic Clam / Zebra Mussel Control

Chlorine will be used for seasonal control of Asiatic clams and Zebra mussels in the service water systems. Chlorine will be utilized as referenced in the facility NPDES Permit Part III.B.4.

3.1.3 Cooling Tower Routine Biological Control

Either an oxidizing or a non-oxidizing biocide will be used to control the growth of slime and algae in the cooling tower systems. If necessary, both types of biocide programs may be fed to maintain performance. The primary program will be Betz Powerline 3625 or an equivalent, a non-oxidizing biocide containing the quaternary amine ADBAC (n-alkyl dimethyl benzyl ammonium chloride). The secondary program will be chlorine, either gaseous or liquid.

3.2 Application Rates and Injection Points

3.2.1 Service Water Routine Biological Control

As a general rule, chlorine will be fed to the main service water headers just downstream from the pump intake bay. The biocide will be fed to each service water system (Units 1&2 and Units 3&4) to achieve a minimum free residual oxidant level of 0.2 ppm. Applications will normally be daily for one hour when the water temperature is above 60F and three times per week for one hour during winter months. It is anticipated that one hour of biocide application will be sufficient to control biological growth, but it may be applied for up to two hours per unit per day.

3.2.2 Service Water Asiatic Clam / Zebra Mussel Control

Chlorine will be fed to the service water headers as above. Each service water system (i.e. Units 1&2 and Units 3&4) will be treated to insure there is no toxicity in the discharge streams. (Reference Part III.B.4)

3.2.3 Cooling Tower Routine Biological Control

The non-oxidizing biocide will be fed to the cooling tower basin. Biocide dosage and frequency will vary based on seasonal conditions and system demand, ranging from 2 to 7.5 ppm active quaternary amine. Feed frequency will range from one to three times per week as needed, and cooling towers will be treated independently. As an alternative, chlorine will be fed to the cooling water in place or in addition to the non-oxidizing biocide. Chlorine dosage and frequency will vary based on seasonal conditions and system demand.

3.3 Elimination of Biocide from System

3.3.1 Service Water Routine Biological Systems

The biocide program proposed will not require a detoxification.

3.3.2 Service Water Asiatic Clam / Zebra Mussel Control

The biocide program proposed will not require a detoxification.

3.3.3 Cooling Tower Routine Biological Control

During non-oxidizing biocide feed the cooling tower blowdown will be closed and will remain closed until tests show that the product concentration in the tower basin is below the detection limit of 0.5 ppm. Bentonite clay will be kept on-hand to allow for detoxification of any inadvertent overflow. When chlorine is used for biocide treatment, the discharge from the cooling tower will be controlled as currently limited in the NPDES Permit for the site.

3.4 Effects in System

3.4.1 Routine Service Water Treatment

Microbiological growth in the service water coolers and heat exchangers will be minimized, thereby improving overall heat transfer and cooling efficiency. Reduced microbiological growth in the service water systems will also improve microbiological control in the systems supplied by service water, including the water treatment plants and cooling towers.

3.4.2 Asiatic Clams / Zebra Mussel Treatment

Macrofouling organisms will be eliminated throughout the water system treated. This will reduce maintenance requirements and enhance heat exchange efficiency.

343

BEST MANAGEMENT PRACTICES PLAN

Georgia Power Company – Plant Scherer

NPDES Permit No. GA0035564

Macrofouling and Biofouling Control

Revision 2.0

July 26, 2001

1.0 INTRODUCTION

1.1 Basis

This BMP has been developed in accordance with Part II.B.13, Part III.B.4, and Part III.B.11 of the plant's NPDES Permit. This BMP addresses the use of biocides to control macrofouling and biofouling in the plant's cooling water systems. Upon approval by the Division and implementation by the plant, it will become part of the NPDES Permit for the site.

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3.2.1 Service Water Routine Biological Control

As a general rule, chlorine will be fed to the main service water headers just downstream from the pump intake bay. The biocide will be fed to each service water system (Units 1&2 and Units 3&4) to achieve a minimum free residual oxidant level of 0.2 ppm. Applications will normally be daily for one hour when the water temperature is above 60°F and three times per week for one hour during winter months. It is anticipated that one hour of biocide application will be sufficient to control biological growth, but it may be applied for up to two hours per unit per day.

3.3	Elimination of Biocide from System	<p>The non-oxidizing biocide will be fed to the cooling tower basin. Biocide dosage and frequency will vary based on seasonal conditions and system demand. Feed frequency will range from one to three times per week as needed, and cooling towers will be treated independently. As an alternative, chlorine will be fed to the cooling water in place or in addition to the non-oxidizing biocide. Chlorine dosage and frequency will vary based on seasonal conditions and system demand.</p>
3.2.3	Cooling Tower Routine Biological Control	<p>Chlorine will be fed to the service water headers as above. Each service water system (i.e. Units 1&2 and Units 3&4) will be treated to insure there is no toxicity in the discharge streams. (Reference Part III.B.4)</p>
3.2.2	Service Water Asiatic Clam / Zebra Mussel Control	
3.3.2	Service Water Asiatic Clam / Zebra Mussel Control	<p>The biocide program proposed will not require a detoxification.</p>
3.3.3	Cooling Tower Routine Biological Control	<p>The biocide program proposed will not require a detoxification.</p>
3.4	Effects in System	<p>During non-oxidizing biocide feed the cooling tower blowdown will be closed and will remain closed until tests show that the product concentration in the tower basin is below the detection limit of 0.5 ppm. Bentonite clay will be kept on-hand to allow for detoxification of any inadvertent overflow. When chlorine is used for biocide treatment, the discharge from the cooling tower will be controlled as currently limited in the NPDES Permit for the site.</p>
3.4.1	Routine Service Water Treatment	<p>Microbiological growth in the service water coolers and heat exchangers will be minimized, thereby improving overall heat transfer and cooling efficiency. Reduced microbiological growth in the service water systems will also improve microbiological control in the systems supplied by service water, including the water treatment plants and cooling towers.</p>
3.4.2	Asiatic Clams / Zebra Mussel Treatment	<p>Macrofouling organisms will be eliminated throughout the water system treated. This will reduce maintenance requirements and enhance heat exchange efficiency.</p>

4.0	MONITORING PROGRAM	4.1 Sample Collection	<p>3.5 Other Biocides and Methods of Control</p> <p>Algae, slime, and microbiological growth will be minimized throughout the cooling tower systems, resulting in improved results condenser performance and reduced plugging of the tower fill.</p> <p>It is expected that this method of treatment and control will be fully effective in controlling the biofouling experienced by this plant. However implementation of this plan does not preclude the use of other biocides or control methods, if they are shown to be equally beneficial. This plan will be revised in accordance with Section 7.0, if other biocides are found to be necessary.</p>
4.1.1	Routine Service Water Treatment	<p>Samples will be collected from the service water system consistent with the facility NPDES Permit.</p> <p>The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.</p>	4.1.2 Asiatic Clam / Zebra Mussel Treatment
4.1.3	Condenser Cooling Water Treatment	<p>Samples will be collected from the service water system consistent with the facility NPDES Permit.</p> <p>Final plant discharge chlorine levels will not exceed limits as set in the existing NPDES Permit.</p> <p>The analytical method for determining the chlorine concentration is amperometric titration, 40 CFR Part 136 Method No. 31, and also listed as EPA Method 330.1. The alternative measurement method will be EPA Method 330.4, DPD.</p>	<p>When a quaternary amine biocide is used, concentration will be measured within the first two hours after beginning treatment. No discharge will be allowed if the concentration is in excess of 0.05 ppm.</p> <p>The analytical method for determining concentration of the non-oxidizing biocide is the Betz Clam-Trol CT-2 Methyl Orange Method. The detection limit (MDL) for this method is 0.05 ppm as Powerline 3625 (0.025 ppm active ADBAC quat). Other analytical methods, which meet or improve the (MDL), may be utilized without modification of this plan. The Division will be notified of any change in analytical methods. QA/QC data such as instrument calibration curves and instrument maintenance records will be retained for review by the Division.</p> <p>In the event of an inadvertent overflow, the bentonite clay product will be added and samples will be collected once per hour at the plant discharge to insure the biocide is not detectable.</p>

4.2 Reporting of Monitoring Results

Biocide concentration in the service water systems and cooling tower basins will be measured and recorded each date that they are treated, as outlined in Section 4.1. Results from samples representative of the discharge will be reported on the NPDES Quarterly Operation Monitoring Report (OMR) in a suitably concise format. Results of operational analyses will be retained for twelve months and will be available for review by the Division.

4.3 Equipment Inspections

To evaluate the effectiveness of the control programs, the main condensers, auxiliary coolers, and systems treated will be periodically inspected for the presence of microbiological growth and macrofouling organisms or relics of organisms.

5.0 OPTIMIZATION PROGRAM

5.1 Equipment Maintenance

All associated equipment and monitoring instruments will be maintained in proper operating conditions at all times.

5.2 Biocide Usage

The amount of biocide used will be re-evaluated periodically to determine if lesser amounts can be effectively utilized. This determination will be based on the results of plant inspections, information from other facilities, plant performance data, and the current scientific literature. If it appears that lower concentrations can effectively control fouling in the systems, then concentrations will be reduced accordingly and more intense inspections will be performed to document the effectiveness. If fouling is found subsequent to any reductions, the concentrations may be increased to the initial levels.

6.0 NPDES PERMIT CONDITIONS

6.1 Incorporation of BMP into Permit

Upon approval by the Division and implementation by the plant, the plan will be incorporated into the NPDES Permit for the facility.

7.0 REVISIONS

7.1 Revising the BMP

This BMP may be revised if necessary. The Plant Manager must approve the revision. A copy of the revised plan will be furnished to the Manager of Environmental Affairs. The Environmental Protection Division must approve any revision prior to implementation.

Approved for implementation:

Date:

7/27/01

Plant Manager:

David M. ...

Plant Scherer NPDES Permit No. GA0035564
Renewal Application Item Number 8

The information below summarizes Georgia Power Company water quality studies of Lake Juliette in the presence of discharges from outfall number 04, Service Water Final Discharge.

**TROPHIC STATE INDEX OF LAKE JULIETTE, CALCULATED FROM T-PO₄, CHL
a, AND SECCHI DEPTH NEAR THE DAM FOREBAY**

<u>Year</u>	<u>T-PO₄</u>	<u>CHLa</u>	<u>Secchi Depth</u>	<u>Mean TSI</u>
1994	43	19	45	36
1995	not sampled in 1995			
1996	not sampled in 1996			
1997	37	33	50	40
1998	ND*	51	46	48
1999	37	33	50	40
2000	ND	29	49	39

ND = not detected (<0.02 ppm)

FECAL COLIFORM DATA

<u>Year</u>	<u>n</u>	<u>Minimum</u>	<u>Maximum</u>	<u>Mean</u>
1994	4	0	0	0
1995	0	not sampled in 1995		
1996	0	not sampled in 1996		
1997	1			10
1998	1			5
1999	3	5	10	7

Lake Juliette stratifies thermally and chemically during the summer months. Extensive aquatic plants in the lake are believed responsible for clear water. Chlorophyll *a* and total phosphorus values are low, with secchi depth values ranging from 4-18.5 ft., with a mean of 10.47 ft, resulting in Trophic State Index estimates in the mesotrophic range as calculated by Carlson (1977). Coliform data indicate values acceptable for contact recreation.

The 2001 edition of Guidelines for Eating Fish From Georgia Waters, 2001 indicates no fish consumption advisory for Lake Juliette. This is based on GA DNR analysis of 43 separate contaminants, including metals, organic chemicals, and pesticides.

Based on the information summarized from Georgia Power Reservoir Water Quality reports, and GA DNR fish consumption advisory data, it appears that Lake Juliette has acceptable water quality for fishing and contact recreation.

Summary of NPDES Permit Rationale

Name Georgia Power Co. - Plant Scherer NPDES No. GA003556A

Location Joliet, Monroe County Major Discharge _____

Minor Discharge ☒ Date 12/17/01 Prepared by Tom Hopkins

Draft permit is first issuance _____ reissuance with no modifications from previous permit _____ modification of existing permit ☒.

Discharge is industrial ☒ municipal _____ privately owned (domestic wastewater only) _____. If industrial, point source category is 40 CFR

423 Steam Electric Power Generating subcategory is N/A

3272 megawatts, SIC code is 4911.

Facility located on stream segment that is and the basis for derivation of limitation is:

- ☐ Stream water quality limited
- ☐ Based on water quality model
- ☐ Based on instream calculation at 7 day, 10 year low flow
- ☒ Stream effluent limited
- ☒ Based on promulgated guidelines
- ☒ Based on plant's demonstrated performance
- ☐ Based on demonstrated technology

Discussion:

Monitoring and limits are carried over from previous permit with minor changes: selenium deleted from outfall 02/02A due to non-detect report and lack of discharge (no reasonable potential for WA violations); copper was also analyzed and dismissed. Note: 02/02A is same water as 01. Permittee requested 04 frequency and location change. 04 monitoring now quarterly "in situ."

Check Appropriate Line(s) After Permit Issuance:

- ☐ Public comments were received during public notice period.
- ☐ Final permit was unchanged from draft permit.
- ☐ Final permit included changes from draft permit. See attached draft permit and/or correspondence file for details.

12/17/01

1) OMR SUMMARY- OUTFALLS 02 (I-POND) & 02A (I-POND DRAIN)

YEAR	1 ST QTR	2 ND QTR	3 RD QTR	4 TH QTR
1997	ND	ND	ND	ND
1998	ND	ND	ND	ND
1999	ND	ND	ND	ND
2000	ND	ND	ND	ND
2001	ND	ND	ND	ND

02 and 02A discharge to Berry Creek TQ/10 = 0 cfs, 1Q/10 = 0 cfs
Discharge flow = 222 GPM; TSS = 10 mg/L assumed
Hardness = 101 mg/L; Dilution factor = 1 ÷ 1

2) Copper $K_p = (1.04 \times 10^6)(10)^{-0.7436} = 0.188 \times 10^6$

$C_d/C_T = 1/[1 + (0.188 \times 10^6)(10)(10^{-6})] = 0.348$

01 Max. total recoverable instream = 0.02 mg/L Form 2C

01 Max. dissolved instream = $(0.02)(0.348)/1 = 0.007$ mg/L

01 Avg. total recoverable instream = 0.02 mg/L Form 2C

01 Avg. dissolved instream = $(0.02)(0.348)/1 = 0.007$ mg/L

Acute criteria = $(e^{(0.9422[\ln(101)] - 1.464)})(0.96) = 0.017$ mg/L

Chronic criteria = $(e^{(0.8545[\ln(101)] - 1.465)})(0.96) = 0.011$ mg/L

02, 02A are assumed to have same copper as 01.

Since instream conc. of copper for 02, 02A are less than calculated criteria, no limits or monitoring is required.

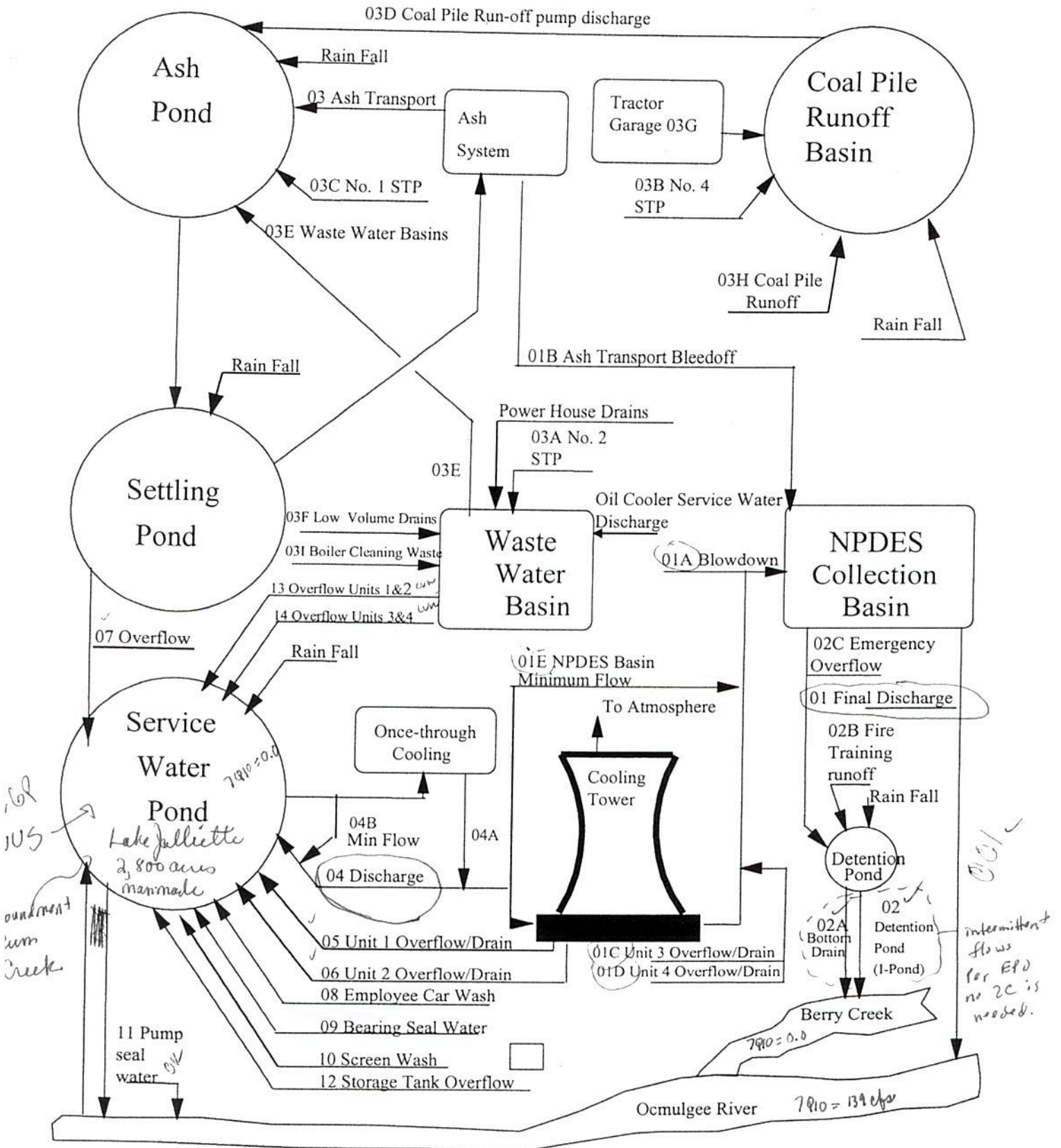
12/17/01

GEORGIA POWER 0035564 02, 02A CONTINUED

- 3) Selenium 01 selenium is now reported at less than 0.04 mg/L, the required detection limit. This result is transferred to 02, 02A and is below criteria. Therefore, the selenium monitoring and limit are no longer required.

Plant Scherer NPDES Flow Diagram

July 2001



NPDES PERMIT REVIEW

ROUTING Log into database by Administrative Staff (Within 2 days of receipt)	STATE: <u>GA</u>	<input type="checkbox"/> Major <input checked="" type="checkbox"/> Minor Primary <input type="checkbox"/> Modification <input type="checkbox"/> Revised permit
	NPDES NUMBER: <u>35564</u>	
	FACILITY NAME: <u>Plant Scherer</u>	
	DRAFT REC'D <u>1/02/2008</u>	FINAL REC'D _____
	ENFORCEMENT coordination needed? Y / N (If yes, make copy and send to enforcement) Date sent _____ Date due _____	

Give to Permit Reviewer:

Review due date:

Initial Review by Permit Reviewer to determine whether other staff needs to review. Ensure permit or copy is sent. (Within 5 days of receipt)	Is permit one of these three types? Y / N <input type="checkbox"/> CAFO - route to Sam Sampath <input type="checkbox"/> Pulp & Paper - route to Karrie Jo Shell <input type="checkbox"/> Power Plant - route to Karrie Jo Shell Date sent _____ Date due _____
	TMDL review needed? Y / N Date sent _____ Date due _____ (To TMDL coordinator) New or expanded with DO, BOD, CBOD WLA? Y / N (To Virginia Buff) Date sent _____ Date due _____

Is this on the 303(d) list? Y / N List pollutant(s) of concern: _____

WET review needed? Y / N If yes, complete & attach WET Permitting Checklist

Permit Reviewer to complete Overview Check Sheet and prepare as needed: okay, comments, objections (discuss with supervisor as needed). Place all documentation in file and log into database.

Not in Review list
 GF 1/7/08
 316(b) = 1 cooling tower
 No comments. 1/23/08
 Review & log completed: _____
 Initial and Date: _____

Georgia Department of Natural Resources

GEORGIA ENVIRONMENTAL PROTECTION DIVISION

Permitting, Compliance and Enforcement Program

4220 International Parkway, Suite 101

Atlanta, Georgia 30354

404/362-2680

FAX 404/362-2691

December 27, 2007

Mr. Charles H. Huling, P.E.
Vice President, Environmental Affairs
Georgia Power Company
Bin 10221
241 Ralph McGill Boulevard, NE
Atlanta, GA 30308-3374

RE: Plant Scherer
NPDES Permit No. GA0035564

Dear Mr. Huling:

The Environmental Protection Division (EPD) has received your application for reissuance of a permit to discharge treated wastewater to the waters of the State of Georgia. We are processing your application and intend to issue in the near future a National Pollutant Discharge Elimination System (NPDES) Permit in accordance with the Georgia Water Quality Control Act and the Federal Clean Water Act. However, before issuing the permit, we require that you circulate a Public Notice by posting the notice at the entrance of the Monroe County, Georgia Courthouse. Within 10 days of receipt of this letter, the Public Notice should be posted and remain for a period of thirty days. At the end of the 30 day public notice period, the EPD will make a determination on issuance of the NPDES Permit. Please provide written confirmation upon posting to indicate that you have satisfied the requirements of this letter.

Attached is a copy of the Public Notice and the draft NPDES Permit which contains the proposed conditions of your permit. If you have any comments or questions concerning the Permit or the Public Notice, please contact Mr. Tom Hopkins at 404-362-2680.

Sincerely,



Dominic J. Weatherill
Unit Coordinator
Industrial Wastewater Unit

DJW:th
Attachments

cc: Mr. Wayne Aronson (w/attachments)
U. S. Environmental Protection Agency

PUBLIC NOTICE
GEORGIA DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

NOTICE OF APPLICATION FOR NATIONAL POLLUTANT DISCHARGE ELIMINATION
SYSTEM PERMIT TO DISCHARGE TREATED WASTEWATER INTO WATERS OF THE
STATE OF GEORGIA.

The Georgia Environmental Protection Division has received a new NPDES permit application for the reissuance of an existing NPDES permit. Having reviewed such application, the Environmental Protection Division proposes to issue for a maximum term of five years the following permit subject to specific pollutant limitations and special conditions.

Georgia Power Company, 241 Ralph McGill Boulevard, N.E., Atlanta, Georgia 30308, NPDES Permit No. GA 0035564 for its Plant Scherer steam electric generating facility located at 10986 Highway 87 in Juliette, Monroe County, Georgia 31046. Fifteen discharges consisting of cooling tower blowdown/overflow, flue gas desulfurization, ash pond water, service water, and miscellaneous low volume wastewaters enter Lake Juliette, the Ocmulgee River, and tributaries in the Ocmulgee River Basin.

Persons wishing to comment upon or object to the proposed determinations are invited to submit same in writing to the EPD address below, no later than thirty (30) days after this notification. All comments received prior to or on that date will be considered in the formulation of final determinations regarding the application. Additional information regarding public hearing procedures is available, by writing the EPD at the address noted below.

A fact sheet or copy of the draft permit is available by writing the Environmental Protection Division. The permit application, draft permit, comments received, and other information are available for review at Watershed Protection Branch, 4220 International Parkway, Suite 101, Atlanta, Georgia 30354, between the hours of 9:00 a.m. and 4:00 p.m., Monday through Friday. For additional information contact: Ms. Marzieh Shahbazaz, Permitting, Compliance and Enforcement Program, Phone (404) 362-2680.

PERMIT NO. GA0035564

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

AUTHORIZATION TO DISCHARGE UNDER THE
NATIONAL POLLUTANT DISCHARGE ELIMINATION SYSTEM

In compliance with the provisions of the Georgia Water Quality Control Act (Georgia Laws 1964, p. 416, as amended), hereinafter called the "State Act;" the Federal Water Pollution Control Act, as amended (33 U.S. C. 1251 et seq.), hereinafter called the "Federal Act;" and the Rules and Regulations promulgated pursuant to each of these Acts,

Georgia Power Company
241 Ralph McGill Boulevard, N.E.
Atlanta, Georgia 30308

is authorized to discharge from a facility located at

Plant Scherer (SIC 4911)
10986 Highway 87
Juliette, Monroe County, Georgia 31046

to receiving waters

Berry Creek, Lake Juliette (Rum Creek) and the Ocmulgee River
(Ocmulgee River Basin)

in accordance with effluent limitations, monitoring requirements and other
conditions set forth in Parts I, II and III hereof.

This permit shall become effective on _____.

This permit and the authorization to discharge shall expire at midnight,
_____.



Signed this _____ day of _____, 2008.

Director,
Environmental Protection Division

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

A. EFFLUENT LIMITATIONS AND MONITORING REQUIREMENTS

1. During the period beginning effective date and lasting through _____, the permittee is authorized to discharge from outfall(s) serial number(s) 01 - Final Plant Discharge: Combined discharge of outfalls 01A, 01B, 01C, 01D, and 01E to the Ocmulgee River.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations		Monitoring Requirements				
	Mass Based		Concentration Based		Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg. (mg/l)	Daily Max.			
Flow-m ³ /Day (MGD)	-	-	-	-	-	-	-
Total Residual Chlorine (TRC)	-	-	-	-	1/Day*	Grab	Final Discharge

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by a grab sample of the final discharge to the Ocmulgee River.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Monitoring of TRC is required only during continuous service water chlorination for controlling asiatic clams.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

2. During the period beginning effective date and lasting through the permittee is authorized to discharge from outfall(s) serial number(s) 01Z - Alternate Final Plant Discharge: Combined discharge of outfalls 01A, 01B, 01C, 01D, and 01E to Lake Juliette.**

Such discharges shall be limited and monitored by the permittee as specified below:

<u>Effluent Characteristic</u>	<u>Discharge Limitations</u>			<u>Monitoring Requirements</u>		
	<u>Mass Based</u>		<u>Concentration Based</u> (mg/l)	<u>Measurement</u>		
	Daily Avg.	Daily Max.		Daily Avg.	Daily Max.	Frequency
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Residual Chlorine (TRC)	-	-	-	-	-	-
				1/Day*	Grab	Final Discharge

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by a grab sample of the final discharge to Lake Juliette. There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Monitoring of TRC is required only during continuous service water chlorination for controlling asiatic clams.

** See Part III, Special Requirements, regarding the Lake Juliette Drought Contingency Plan.

PART I

Page 3 of 28
Permit No. GA0035564

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

3.

During the period beginning effective date and lasting through the permittee is authorized to discharge from outfall(s) serial number(s) 01A - Cooling Tower Blowdown for Units 1, 2, 3 and 4.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic

Discharge Limitations
Concentration Based
(mg/l)

Monitoring Requirements

Daily Max.	Avg.	Inst. Max.	Measurement Frequency	Sample Type	Sample Location
Flow-m ³ /Day (MGD)	-	-	-	-	-
Free Available Chlorine (FAC)	-	0.2	1/Week	Multiple Grabs	Blowdown Line
Total Residual Chlorine (TRC)	-	-	1/Week	Multiple Grabs	Blowdown Line
TRC Time (minutes/day/unit)	120	-	1/Week	Multiple Grabs	Blowdown Line
Total Residual Chlorine (TRC)	-	-	1/Week	Multiple Grabs	Service Water
Total Chromium	0.2	-	-	Grab	Blowdown Line
Total Zinc	1.0	-	-	Grab	Blowdown Line

Multiple grab samples are to be collected on 15 minute intervals during periods of FAC and TRC discharges attributable to cooling tower/condenser chlorination. Intervals are to be once per day during FAC and TRC discharges attributable to continuous service water chlorination. Samples are to be taken before each individual cooling tower blowdown combines with waste streams from other sources.

All numerical discharge limitations and monitoring requirements apply to the individual cooling tower blowdown from each generating unit. The limitations of 0.2/0.5 mg/l of FAC apply to FAC discharge attributable to cooling tower/condenser chlorination (i.e. effluent concentration of FAC above that due to continuous service water system chlorination). Time of discharge of TRC attributable to cooling tower/condenser chlorination is limited to 2 hours/day/unit. Simultaneous discharge of TRC attributable to cooling tower/condenser chlorination is prohibited.

PART I

Page 4 of 28

Permit No. GA0035564

EPD 2.21-4

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

4. During the period beginning effective date and lasting through _____, the permittee is authorized to discharge from outfall(s) serial number(s) 01B - Ash Transport Bleedoff (includes 03E Wastewater Basins Units 1, 2, 3 and 4, Low Volume Waste).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based (mg/l)	Measurement Frequency	Sample Type	Sample Location*
	Daily Avg.	Daily Max.				
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Suspended Solids (TSS)	-	-	30	2/Month	Grab	Bleedoff
Oil and Grease (O & G)	-	-	15	2/Month	Grab	Bleedoff

* Samples are to be taken at the ash transport bleedoff line prior to combination with any other wastewater stream.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

5. During the period beginning effective date and lasting through _____, the permittee is authorized to discharge from outfall(s) _____ serial number(s) 01C and 01D - Units 3 and 4 Cooling Tower Overflows/Basin Drains.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations				Monitoring Requirements		
	Units (Specify) (mg/l)				Measurement Frequency	Sample Type	Sample Location
Flow-m ³ /Day (MGD)	Avg.	Inst. Max.	Daily Avg.	Daily Max.			
Total Suspended Solids (TSS)	-	-	-	-	2/Month	-	-
Oil & Grease (O & G)	-	-	30	100	2/Month	Grab	Overflow
Free Available Chlorine (FAC)	0.2	0.5	15	20	1/Week	Grab	Overflow
Total Residual Chlorine (TRC)	-	-	-	-	1/Week	Multiple Grabs	Overflow
TRC Time (minutes/day/unit)	-	-	-	-	1/Week	Multiple Grabs	Overflow
Total Chromium	-	-	-	120	-	Multiple Grabs	Overflow
Total Zinc	-	-	-	0.2	-	Grab	Overflow
	-	-	-	1.0	-	Grab	Overflow

TSS and O & G are required for basin drain discharges. FAC, TRC, TRC Time, chromium, and zinc are required for cooling tower overflow discharges.

Multiple grab samples are to be collected on 15 minute intervals during periods of FAC and TRC discharges attributable to cooling tower/condenser chlorination. Intervals are to be once per day during FAC and TRC discharges attributable to continuous service water chlorination. Samples are to be taken before each individual cooling tower overflow combines with waste streams from other sources.

All numerical discharge limitations and monitoring requirements apply to the individual cooling tower overflow from each generating unit. The limitations of 0.2/0.5 mg/l of FAC apply to FAC discharge attributable to cooling tower/condenser chlorination (i.e. effluent concentration of FAC above that due to continuous service water system chlorination). Time of discharge of TRC attributable to cooling tower/condenser chlorination is limited to 2 hours/day/unit. Simultaneous discharge of TRC attributable to cooling tower/condenser chlorination is prohibited.

PART I

Page 6 of 28

Permit No. GA0035564

6. During the period beginning effective date and lasting through _____, the permittee is authorized to discharge from outfall(s) serial number(s) 02 - Detention Pond (I Pond) and 02A - I Pond Bottom Drain; Discharges to Berry Creek (includes 02B, Fire Training Runoff and 02C, NPDES Basin Emergency Overflow).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based (mg/l)	Measurement Frequency		Sample Location
	Daily Avg.	Daily Max.		Daily Avg.	Daily Max.	
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Residual Chlorine (TRC) ⁽¹⁾	-	-	-	-	1/Day	Grab Final Discharge ⁽³⁾

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored once per month by a grab sample at the final discharge to Berry Creek or at the bottom drain when discharging.

There shall be no discharge of floating solids or visible foam in other than trace amounts.

- (1) Monitoring of TRC is required only when continuous service water chlorination for controlling asiatic clams coincides with discharge from the NPDES Basin Emergency Overflow (02C) to I Pond.
- (2) Monitoring for pH is required only when the NPDES Basin Emergency Overflow (02C) is discharging to I pond.
- (3) Final discharge or bottom drain when discharging.

STATE OF GEORGIA

DEPARTMENT OF NATURAL RESOURCES

ENVIRONMENTAL PROTECTION DIVISION

- 7.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based	Measurement Frequency	Sample Type	Sample Location
	Daily Avg.	Daily Max.	Daily Avg.			
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Temperature	-	-	-	1/Quarter	Grab	*
Total Residual Chlorine (TRC)	-	-	-	1/Quarter	Grab	*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Temperature will be monitored and reported for the plant intake and the discharge. TRC will also be monitored and reported for the discharge. The temperature difference (" ΔT ") between the intake and discharge temperature shall be calculated and entered on the monitoring report. The discharge temperature and TRC are the temperature and TRC recorded at a point not more than 50 feet from the discharge pipe outlet at a depth of 3 feet or other locations approved by the Division.

PART I

Page 8 of 28

Permit No. GA0035564

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION

8. During the period beginning effective date and lasting through , the permittee is authorized to discharge from outfall(s) serial number(s) 05 and 06 - Units 1 and 2 Cooling Tower Overflows/Basin Drains to Lake Juliette.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Units (Specify)			Measurement Frequency	Sample Type	Sample Location
	Avg.	Inst.	Max. Daily Avg.	Daily Max.		
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Suspended Solids (TSS)	-	-	30	100	2/Month	Grab
Oil & Grease (O & G)	-	-	15	20	2/Month	Grab
Free Available Chlorine (FAC)	0.2	0.5	-	-	1/Week	Multiple Grabs
Total Residual Chlorine (TRC)	-	-	-	-	1/Week	Multiple Grabs
TRC Time (minutes/day/unit)	-	-	-	120	1/Week	Multiple Grabs
Total Chromium	-	-	-	0.2	-	Grab
Total Zinc	-	-	-	1.0	-	Grab
						Overflow
						Overflow
						Overflow
						Overflow
						Overflow
						Overflow
						Overflow

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sampling. There shall be no discharge of floating solids or visible foam in other than trace amounts.

TSS, O & G and pH are required for basin drain discharges. FAC, TRC, TRC Time, chromium, zinc, and pH are required for cooling tower overflow discharges.

Multiple grab samples are to be collected on 15 minute intervals during periods of FAC and TRC discharges attributable to cooling tower/condenser chlorination. Intervals are to be once per day during FAC and TRC discharges attributable to continuous service water chlorination. Samples are to be taken before each individual cooling tower overflow combines with waste streams from other sources.

All numerical discharge limitations and monitoring requirements apply to the individual cooling tower overflow from each generating unit. The limitations of 0.2/0.5 mg/l of FAC apply to FAC discharge attributable to cooling tower/condenser chlorination (i.e. effluent concentration of FAC above that due to continuous service water system chlorination). Time of discharge of TRC attributable to cooling tower/condenser chlorination is limited to 2 hours/day/unit. Simultaneous discharge of TRC attributable to cooling tower/condenser chlorination is prohibited.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

9. During the period beginning effective date and lasting through ,
the permittee is authorized to discharge from outfall(s) serial number(s) 07 - Settling Pond Emergency Overflow
to Lake Juliette (Ash Transport Water).

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based (mg/l)	Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.				
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Suspended Solids (TSS)-	-	-	30	100	2/Month	Grab
Oil and Grease (O & G)	-	-	15	20	2/Month	Grab
						Overflow
						Overflow

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units
and shall be monitored twice per month by grab sampling.*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Monitoring for TSS, O&G, and pH is required only when an overflow is occurring.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

10. During the period beginning effective date and lasting through _____, the permittee is authorized to discharge from outfall(s) serial number(s) 08 - Employee Car Wash, 09 Service Water Pump Seal Water, 10 Service Water Screen Backwash, 12 Condensate/Filtered Water/Potable Water Tank Overflows discharging to Lake Juliette, and 11 River Intake Pump Seal Water discharging to the Ocmulgee River. Such discharges shall be limited as specified below:

There shall be no discharge of floating solids or visible foam in other than trace amounts.

These discharges shall remain as described above. If the Director determines that water quality standards are not being met as the result of these discharges and so notifies the permittee in writing, the permittee shall take all reasonable steps to prevent the discharge from causing water quality standards to be exceeded in the receiving water.

PART I

Page 11 of 28

Permit No. GA0035564

EPD 2.21-11

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

11. During the period beginning effective date and lasting through , the permittee is authorized to discharge from outfall(s) serial number(s) 13 and 14 - Emergency Overflows to Lake Juliette (Low Volume Wastes) from Units 1 and 2 Wastewater Basin and Units 3 and 4 Wastewater Basin.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based (mg/l)	Measurement Frequency*	Sample Type	Sample Location
	Daily Avg.	Daily Max.				
Flow-m ³ /Day (MGD)	-	-	-	-	-	-
Total Suspended Solids (TSS)	-	-	30	2/Month	Grab	Overflow
Oil and Grease (O & G)	-	-	15	2/Month	Grab	Overflow

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sampling.*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Monitoring for TSS, O&G, and pH is required only when an overflow is occurring.

STATE OF GEORGIA
DEPARTMENT OF NATURAL RESOURCES
ENVIRONMENTAL PROTECTION DIVISION

12. During the period beginning effective date and lasting through the permittee is authorized to discharge from outfall(s) serial number(s) 15 - Gypsum Stack Emergency Overflow to Berry Creek.

Such discharges shall be limited and monitored by the permittee as specified below:

Effluent Characteristic	Discharge Limitations			Monitoring Requirements		
	Mass Based		Concentration Based (mg/l)	Measurement Frequency*	Sample Type	Sample Location
Flow-m ³ /Day (MGD)	Daily Avg.	Daily Max.	Daily Avg.	Daily Max.		
	-	-	-	-	-	-
Total Suspended Solids (TSS)	-	-	30	100	2/Month	Grab
Oil and Grease (O & G)	-	-	15	20	2/Month	Grab
						Overflow
						Overflow

The pH shall not be less than 6.0 standard units nor greater than 9.0 standard units and shall be monitored twice per month by grab sampling.*

There shall be no discharge of floating solids or visible foam in other than trace amounts.

* Monitoring for TSS, O&G, and pH is required only when an overflow is occurring.

PART I

Page 13 of 28
Permit No. GA0035564

B. SCHEDULE OF COMPLIANCE

1. The permittee shall achieve compliance with the effluent limitations specified for discharges in accordance with the following schedule:

Effluent limitations are effective upon issuance of this permit.

2. No later than 14 calendar days following a date identified in the above schedule of compliance, the permittee shall submit either a report of progress or, in the case of specific actions being required by identified dates, a written notice of compliance or noncompliance, any remedial actions taken, and the probability of meeting the next scheduled requirement.

Note: EPD as used herein means the Environmental Protection Division of the Department of Natural Resources.

C. MONITORING AND REPORTING

1. Representative Sampling

Samples and measurements taken as required herein shall be representative of the volume and nature of the monitored discharge.

2. Reporting

Monitoring results obtained during the previous three months shall be summarized for each month and reported on an Operation Monitoring Report (Form WQ 1.45). Forms other than Form WQ 1.45 may be used upon approval by EPD. These forms and any other required reports and information shall be completed, signed and certified by a principal executive officer or ranking elected official, or by a duly authorized representative of that person, and submitted to the Division, postmarked no later than the **21st day** of the month following the reporting period. Signed copies of these and all other reports required herein shall be submitted to the following address:

Georgia Environmental Protection Division
Industrial Wastewater Unit
4220 International Parkway
Suite 101
Atlanta, Georgia 30354

All instances of noncompliance not reported under Part I. B. and C. and Part II. A. shall be reported at the time the operation monitoring report is submitted.

3. Definitions

- a. The "daily average" discharge means the total discharge by weight during a calendar month divided by the number of days in the month that the production or commercial facility was operating. Where less than daily sampling is required by this permit, the daily average discharge shall be determined by the summation of all the measured daily discharges by weight divided by the number of days sampled during the calendar month when the measurements were made.
- b. The "daily maximum" discharge means the total discharge by weight during any calendar day.

- c. The "daily average" concentration means the arithmetic average of all the daily determinations of concentrations made during a calendar month. Daily determinations of concentration made using a composite sample shall be the concentration of the composite sample.
- d. The "daily maximum" concentration means the daily determination of concentration for any calendar day.
- e. For the purpose of this permit, a calendar day is defined as any consecutive 24-hour period.
- f. "Bypass" means the intentional diversion of waste streams from any portion of a treatment facility.
- g. "Severe property damage" means substantial physical damage to property, damage to the treatment facilities which causes them to become inoperable, or substantial and permanent loss of natural resources which can reasonably be expected to occur in the absence of a bypass. Severe property damage does not mean economic loss caused by delays in production.

4. Test Procedures

Monitoring must be conducted according to test procedures approved pursuant to 40 CFR Part 136 unless other test procedures have been specified in this permit.

5. Recording of Results

For each measurement or sample taken pursuant to the requirements of this permit, the permittee shall record the following information:

- a. The exact place, date, and time of sampling or measurements, and the person(s) performing the sampling or the measurements;
- b. The dates the analyses were performed, and the person(s) who performed the analyses;
- c. The analytical techniques or methods used; and
- d. The results of all required analyses.

6. Additional Monitoring by Permittee

If the permittee monitors any pollutant at the location(s) designated herein more frequently than required by this permit, using approved analytical methods as specified above, the results of such monitoring shall be included in the calculation and reporting of the values required in the Operation Monitoring Report Form (WQ 1.45). Such increased monitoring frequency shall also be indicated. The Division may require by written notification more frequent monitoring of other pollutants not required in this permit.

7. Records Retention

The permittee shall retain records of all monitoring information, including all records of analyses performed, calibration and maintenance of instrumentation, copies of all reports required by this permit, and records of all data used to complete the application for this permit, for a period of at least three (3) years from the date of the sample, measurement, report or application. This period may be extended by request of the Division at any time.

8. Penalties

The Federal Clean Water Act and the Georgia Water Quality Control Act provide that any person who falsifies, tampers with, or knowingly renders inaccurate any monitoring device or method required to be maintained under this permit, makes any false statement, representation, or certification in any record or other document submitted or required to be maintained under this permit, including monitoring reports or reports of compliance or noncompliance shall, upon conviction, be punished by a fine or by imprisonment, or by both. The Federal Clean Water Act and the Georgia Water Quality Control Act also provide procedures for imposing civil penalties which may be levied for violations of the Act, any permit condition or limitation established pursuant to the Act, or negligently or intentionally failing or refusing to comply with any final or emergency order of the Director of the Division.

A. MANAGEMENT REQUIREMENTS

1. Change in Discharge

- a. Advance notice to the Division shall be given of any planned changes in the permitted facility or activity which may result in noncompliance with permit requirements. Any anticipated facility expansions, production increases, or process modifications must be reported by submission of a new NPDES permit application or, if such changes will not violate the effluent limitations specified in this permit, by notice to the Division of such changes. Following such notice, the permit may be modified to specify and limit any pollutants not previously limited.
- b. All existing manufacturing, commercial, mining, and silviculture dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in the discharge, on a routine or frequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 100 $\mu\text{g/l}$, (ii) five times the maximum concentration reported for that pollutant in the permit application, or (iii) 200 $\mu\text{g/l}$ for acrolein and acrylonitrile, 500 $\mu\text{g/l}$ for 2,4 dinitrophenol and for 2-methyl-4-6-dinitrophenol, or 1 mg/l antimony.
- c. All existing manufacturing, commercial, mining, and silvicultural dischargers shall notify the Division as soon as it is known or there is reason to believe that any activity has occurred or will occur which would result in any discharge on a nonroutine or infrequent basis, of any toxic pollutant not limited in the permit, if that discharge will exceed (i) 500 $\mu\text{g/l}$, (ii) ten times the maximum concentration reported for that pollutant in the permit application, or (iii) 1 mg/l antimony.

2. Noncompliance Notification

If, for any reason, the permittee does not comply with, or will be unable to comply with any effluent limitation specified in this permit, the permittee shall provide the Division with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:

- a. A description of the discharge and cause of noncompliance; and

- b. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

3. Facilities Operation

The permittee shall at all times maintain in good working order and operate as efficiently as possible all treatment or control facilities or systems installed or used by the permittee to achieve compliance with the terms and conditions of this permit. Proper operation and maintenance includes effective performance, adequate funding, adequate operator staffing and training, and adequate laboratory and process controls, including appropriate quality assurance procedures. This provision requires the operation of back-up or auxiliary facilities or similar systems only when necessary to achieve compliance with the conditions of the permit.

4. Adverse Impact

The permittee shall take all reasonable steps to minimize or prevent any discharge in violation of this permit which has a reasonable likelihood of adversely affecting human health or the environment, including such accelerated or additional monitoring as necessary to determine the nature and impact of the noncomplying discharge.

5. Bypassing

- a. If the permittee knows in advance of the need for a bypass, it shall submit prior notice to the Division at least 10 days (if possible) before the date of the bypass. The permittee shall submit notice of any unanticipated bypass with an oral report within 24 hours from the time the permittee becomes aware of the circumstances followed by a written report within five (5) days of becoming aware of such condition. The written submission shall contain the following information:
 1. A description of the discharge and cause of noncompliance; and
 2. The period of noncompliance, including exact dates and times; or, if not corrected, the anticipated time the noncompliance is expected to continue, and steps being taken to reduce, eliminate and prevent recurrence of the noncomplying discharge.

- b. Any diversion or bypass of facilities covered by this permit is prohibited, except (i) where unavoidable to prevent loss of life, personal injury, or severe property damage; (ii) there were no feasible alternatives to the bypass, such as the use of auxiliary treatment facilities, retention of untreated wastes, or maintenance during normal periods of equipment downtime (this condition is not satisfied if the permittee could have installed adequate back-up equipment to prevent a bypass which occurred during normal periods of equipment downtime or preventive maintenance); and (iii) the permittee submitted a notice as required above. The permittee shall operate the treatment works, including the treatment plant and total sewer system, to minimize discharge of the pollutants listed in Part I of this permit from combined sewer overflows or bypasses. Upon written notification by the Division, the permittee may be required to submit a plan and schedule for reducing bypasses, overflows, and infiltration in the system.

6. Sludge Disposal Requirements

Hazardous sludge shall be disposed of in accordance with the regulations and guidelines established by the Division pursuant to the Federal Clean Water Act (CWA) and the Resource Conservation and Recovery Act (RCRA). For land application of nonhazardous sludge, the permittee shall comply with any applicable criteria outlined in the Division's "Guidelines for Land Application of Municipal Sludges." Prior to disposal of sludge by land application, the permittee shall submit a proposal to the Division for approval in accordance with applicable criteria in the Division's "Guidelines for Land Application of Municipal Sludges." Upon evaluation of the permittee's proposal, the Division may require that more stringent control of this activity is required. Upon written notification, the permittee shall submit to the Division for approval, a detailed plan of operation for land application of sludge. Upon approval, the plan will become a part of the NPDES permit. Disposal of nonhazardous sludge by other means, such as landfilling, must be approved by the Division.

7. Sludge Monitoring Requirements

The permittee shall develop and implement procedures to insure adequate year-round sludge disposal. The permittee shall monitor the volume and concentration of solids removed from the plant. Records shall be maintained which document the quantity of solids removed from the plant. The ultimate disposal of solids shall be reported monthly (in the unit of lbs/day) to the Division with the Operation Monitoring Report Forms required under Part I (C)(2) of this permit.

8. Power Failures

Upon the reduction, loss, or failure of the primary source of power to said water pollution control facilities, the permittee shall use an alternative source of power if available to reduce or otherwise control production and/or all discharges in order to maintain compliance with the effluent limitations and prohibitions of this permit.

If such alternative power source is not in existence, and no date for its implementation appears in Part I, the permittee shall halt, reduce or otherwise control production and/or all discharges from wastewater control facilities upon the reduction, loss, or failure of the primary source of power to said wastewater control facilities.

B. RESPONSIBILITIES

1. Right of Entry

The permittee shall allow the Director of the Division, the Regional Administrator of EPA, and/or their authorized representatives, agents, or employees, upon the presentation of credentials:

- a. To enter upon the permittee's premises where a regulated activity or facility is located or conducted or where any records are required to be kept under the terms and conditions of this permit; and
- b. At reasonable times, to have access to and copy any records required to be kept under the terms and conditions of this permit; to inspect any facilities, equipment (including monitoring and control equipment), practices, or operations regulated or required under this permit; and to sample any substance or parameters in any location.

2. Transfer of Ownership or Control

A permit may be transferred to another person by a permittee if:

- a. The permittee notifies the Director in writing of the proposed transfer at least thirty (30) days in advance of the proposed transfer;
- b. A written agreement containing a specific date for transfer of permit responsibility and coverage between the current and new permittee (including acknowledgement that the existing permittee is liable for violations up to that date, and that the new permittee is liable for violations from that date on) is submitted to the Director at least thirty (30) days in advance of the proposed transfer; and

- c. The Director, within thirty (30) days, does not notify the current permittee and the new permittee of the Division's intent to modify, revoke and reissue, or terminate the permit and to require that a new application be filed rather than agreeing to the transfer of the permit.

3. Availability of Reports

Except for data deemed to be confidential under O.C.G.A. § 12-5-26 or by the Regional Administrator of the EPA under the Code of Federal Regulations, Title 40, Part 2, all reports prepared in accordance with the terms of this permit shall be available for public inspection at an office of the Division. Effluent data, permit applications, permittee's names and addresses, and permits shall not be considered confidential.

4. Permit Modification

After written notice and opportunity for a hearing, this permit may be modified, suspended, revoked or reissued in whole or in part during its term for cause including, but not limited to, the following:

- a. Violation of any conditions of this permit;
- b. Obtaining this permit by misrepresentation or failure to disclose fully all relevant facts;
- c. A change in any condition that requires either a temporary or permanent reduction or elimination of the permitted discharge; or
- d. To comply with any applicable effluent limitation issued pursuant to the order the United States District Court for the District of Columbia issued on June 8, 1976, in Natural Resources Defense Council, Inc. et.al. v. Russell E. Train, 8 ERC 2120(D.D.C. 1976), if the effluent limitation so issued:
 - (1) is different in conditions or more stringent than any effluent limitation in the permit; or
 - (2) controls any pollutant not limited in the permit.

5. Toxic Pollutants

The permittee shall comply with effluent standards or prohibitions established pursuant to Section 307(a) of the Federal Clean Water Act for toxic pollutants, which are present in the discharge within the time provided in the regulations

that establish these standards or prohibitions, even if the permit has not yet been modified to incorporate the requirement.

6. Civil and Criminal Liability

Nothing in this permit shall be construed to relieve the permittee from civil or criminal penalties for noncompliance.

7. State Laws

Nothing in this permit shall be construed to preclude the institution of any legal action or relieve the permittee from any responsibilities, liabilities, or penalties established pursuant to any applicable State law or regulation under authority preserved by Section 510 of the Federal Clean Water Act.

8. Water Quality Standards

Nothing in this permit shall be construed to preclude the modification of any condition of this permit when it is determined that the effluent limitations specified herein fail to achieve the applicable State water quality standards.

9. Property Rights

The issuance of this permit does not convey any property rights in either real or personal property, or any exclusive privileges, nor does it authorize any injury to private property or any invasion of personal rights, nor any infringement of Federal, State or local laws or regulations.

10. Expiration of Permit

Permittee shall not discharge after the expiration date. In order to receive authorization to discharge beyond the expiration date, the permittee shall submit such information, forms, and fees as are required by the agency authorized to issue permits no later than 180 days prior to the expiration date.

11. Contested Hearings

Any person who is aggrieved or adversely affected by an action of the Director of the Division shall petition the Director for a hearing within thirty (30) days of notice of such action.

12. Severability

The provisions of this permit are severable, and if any provision of this permit, or the application of any provision of this permit to any circumstance, is held invalid, the application of such provision to other circumstances, and the remainder of this permit, shall not be affected thereby.

13. Best Management Practices

The permittee will implement best management practices to control the discharge of hazardous and/or toxic materials from ancillary manufacturing activities. Such activities include, but are not limited to, materials storage areas, in-plant transfer, process and material handling areas; loading and unloading operations; plant site runoff; and sludge and waste disposal areas.

14. Need to Halt or Reduce Activity Not a Defense

It shall not be a defense for a permittee in an enforcement action that it would have been necessary to halt or reduce the permitted activity in order to maintain compliance with the conditions of this permit.

15. Duty to Provide Information

- a. The permittee shall furnish to the Director of the Division, within a reasonable time, any information which the Director may request to determine whether cause exists for modifying, revoking and reissuing, or terminating this permit or to determine compliance with this permit. The permittee shall also furnish upon request copies of records required to be kept by this permit.
- b. When the permittee becomes aware that it failed to submit any relevant facts in a permit application or submitted incorrect information in a permit application or any report to the Director, it shall promptly submit such facts and information.

26. Upset Provisions

Provisions of 40 CFR 122.41(n)(1)-(4), regarding "Upset" shall be applicable to any civil, criminal, or administrative proceeding brought to enforce this permit.

A. PREVIOUS PERMITS

1. All previous State water quality permits issued to this facility, whether for construction or operation, are hereby revoked by the issuance of this permit. This action is taken to assure compliance with the Georgia Water Quality Control Act, as amended, and the Federal Clean Water Act, as amended. Receipt of the permit constitutes notice of such action. The conditions, requirements, terms and provisions of this permit authorizing discharge under the National Pollutant Discharge Elimination System govern discharges from this facility.

B. SPECIAL REQUIREMENTS

1. There shall be no discharge of polychlorinated biphenyl compounds such as those commonly used for transformer fluid.
2. Any metal cleaning wastes generated will be contained for further treatment or disposal in a manner to permit compliance at time of discharge (03I, Chemical Cleaning Wastes) with requirements listed below or disposed of in a manner approved by the Division. This applies to any preoperational chemical cleaning of metal process equipment also. The treatment and disposal procedures shall be discussed in the flow monitoring and characterization submittal.
3. The quantity of pollutants discharged (03I, Chemical Cleaning Wastes) in metal cleaning waste shall not exceed the quantity determined by multiplying the flow of metal cleaning wastes times the concentrations listed below. All effluent characteristics shall be monitored 1/week by grab sampling when a discharge is occurring.

<u>Effluent Characteristic</u>	<u>Discharge Limitation (mg/l)</u>	
	<u>Daily Average</u>	<u>Daily Maximum</u>
Total Suspended Solids	30	100
Oil and Grease	15	20
Copper	1.0	1.0
Iron	1.0	1.0

4. Neither free available chlorine (FAC) nor total residual chlorine (TRC) may be discharged from any unit for more than two hours in any one day and not more than one unit in any plant may discharge free available or total residual chlorine at any one time unless the utility can demonstrate to the Director that the units in a particular location cannot operate at or below this level of chlorination. The permittee has demonstrated the need to continuously chlorinate the service water system to control asiatic clams. The present intent is to chlorinate the service water periodically from April through October, five days per month for 24 hours per day at an initial level of 1.0 mg/l FAC. Other months, longer durations, and lower FAC levels may be used. This chlorination practice will result occasionally in the discharge of FAC or TRC from each cooling tower simultaneously and for more than 2 hours per day. The permittee must reduce the chlorine discharge if possible and has performed a study to determine the minimum practicable chlorine levels,

frequencies and duration of continuous chlorination for the service water system to adequately control asiatic clams.

5. In accordance with 40 CFR 423.11(k), the free available chlorine (FAC) average means the average over any individual chlorine release period of 2 hours per day per unit. The FAC maximum is the instantaneous maximum which may occur at any time. Further, the permittee will develop a system for monitoring and recording total time of FAC and TRC discharges. The results shall be reported in a suitably concise form.
6. In accordance with 40 CFR 423.13(d)(3), instead of the monitoring specified, the permittee shall certify every two years in the flow characterization study that no priority pollutant is above detectable limits in outfall 01A, 01C, 01D, 05 and 06 (cooling tower blowdowns or overflows). This certification may be based on manufacturers' certifications or engineering calculations.
7. In the event that waste streams for various sources are combined for treatment or discharge, the quantity of each pollutant or pollutant property controlled by this permit shall not exceed the specified limitations for that source.
8. The Director may modify any effluent limitation upon request of the permittee if such limitation is covered by an approved variance or by an amendment to the Federal Clean Water Act.
9. Once every two years, the permittee shall submit to the Director flow monitoring and characterization information regarding the various waste streams.
10. All sewage treatment plants (STP) must be properly operated and maintained. This applies to 03A No. 2 STP, 03B No. 4 STP, and 03C, No. 1 STP.
11. Summary of flow characterization study requirements from preceding pages.
 - a. Metal cleaning waste treatment and disposal procedures.
 - b. Flow determination of various waste streams.
 - c. Cooling tower blowdown priority pollutant certification per 40 CFR 423.13(d)(3).
12. The provisions of 40 CFR 122.41(l)(6)(iii) regarding waiver of the 5 day written report required by Part II.A.2. and Part II.A.5 of this permit shall be applicable and may be implemented on a case-by-case basis by EPD for noncompliances which are orally reported by the permittee within 24 hours of discovery of the noncompliance condition.
13. The Division recognizes the inherent analytical variability in approved test methods and procedures and further agrees that such issues can be raised by the permittee as a defense in an enforcement action.

14. Upon approval of the Director, the permittee shall, on a case-by-case basis, be able to utilize alternative analytical methods, conversion factors, methodology, procedures, or new technologies, to ensure that the biomonitoring and toxicity reduction requirements of Part III.C. and the testing/reporting requirements of the permit are adequately addressed.
15. If the results for a given sample are such that a parameter is not detected at or above the method detection limit or reporting limit, a value of zero will be reported for that sample and the method detection limit or reporting limit will also be reported. Such sample shall be deemed to be in compliance with the permit limit.
16. The best management practices plan for "Macrofouling and Biofouling Control" dated October 24, 2006 is hereby approved and incorporated in this permit. The plan may be modified upon written approval by the Division.
17. The permittee is authorized to discharge storm water from the outfalls identified in Part I, Section A. of this permit provided that these discharges do not cause violations of State water quality standards in the receiving streams.
18. The Lake Juliette Drought Contingency Plan submitted on December 7, 2007 is hereby approved and incorporated in this permit. The plan may be modified upon written approval by the Division.

C. BIOMONITORING AND TOXICITY REDUCTION REQUIREMENTS

In order to determine whether the permittee is discharging wastes in concentrations or combinations which may have an adverse impact on the State's water quality, the Division can require the permittee to conduct a biomonitoring program.

If toxicity is believed to be present in the permittee's effluent, the Division may require the permittee to develop a biomonitoring screening program according to the following schedule:

1. Within 90 days of Division notification a screening program study plan detailing the test methodology and test organisms shall be submitted for conducting a forty-eight hour static acute test of the final effluent.

Note: If residual chlorine is present in the final effluent from a treatment and/or disinfection process, a prechlorinated or dechlorinated sample will be tested.

2. Within 90 days of Division approval of the study plan, the permittee shall conduct and submit the results of the forty-eight hour static acute test.

The Division will then review the results of the forty-eight hour static acute test. If the test criteria specified in the study plan are exceeded, then the permittee shall within 90 days of written notification by the Division repeat steps 1. and 2. above replacing the forty-eight hour static acute test with the ninety-six hour test.

The Division will then review the results of the ninety-six hour test. If the criteria* detailed in the ninety-six hour test indicates toxicity, then the permittee shall within 90 days of written notification by the Division submit to the Division a plan to reduce the toxicity of the effluent. Within 270 days of Division approval of this plan, the permittee shall implement the plan and initiate follow-up biomonitoring of the effluent in accordance with the approved toxicity reduction plan. The toxicity reduction plan shall not be complete until the permittee meets the criteria detailed in the ninety-six hour test plan.

If there are substantial composition changes in the permittee's effluent, the permittee may be required to repeat the forty-eight hour static acute test upon notification by the Division. Unless otherwise advised, the permittee shall perform biomonitoring of the effluent as provided in C. 1. and 2. above, at a minimum of once every three years upon notification by the Division. On a case specific basis, chronic toxicity testing procedures may be required. Upon approval by the Division, all of the plans will become part of the requirements of this permit.

*The 96 hour criteria shall define toxicity as a greater than 10% mortality of the exposed test organisms in 96 hours or less when the test solution contains volumes of effluent and dilution water proportional to the plant daily average flow and the 7Q10 flow of the receiving stream, as determined using test procedures and methods, and statistical methods for evaluating test results, developed by the permittee and approved by the Division pursuant to this section or revised pursuant to Part III. B. 14. above.

Charles H. (Chuck) Huling, P.E.
Vice President
Environmental Affairs

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May 24, 2006

Dr. Carol A. Couch
Director
Environmental Protection Division
Suite 1152 East
205 Butler Street, S.E.
Atlanta, Georgia 30334

RE: Plant Scherer
NPDES Permit No. GA0035564
Application for Permit Renewal

Dear Dr. Couch:

Attached is the NPDES permit renewal application package for the Georgia Power Company Plant Scherer facility located in Juliette, Georgia. In addition to the required EPA Forms 1 and 2C, the application package includes the following supporting documentation:

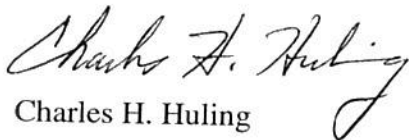
1. Line drawing showing the wastewater streams and water flow through the facility.
2. An aerial photo/NPDES outfall location diagram showing the locations of process wastewater discharges and commingled storm water discharges.
3. A segment of the USGS 7.5 minute topographic map showing the locations of the two primary outfalls, outfall numbers 01 and 04, as well as other relevant features.
4. An evaluation demonstrating that the Plant Scherer ash treatment systems have adequate storage volume to meet EPA's co-treatment guidelines through the next permit term.
5. A tabulation of the monitoring results for all chrome and zinc sampling conducted during the current permit term. We request EPD consider removing from the permit the annual monitoring of chrome and zinc in the several waste streams that contain cooling tower water. The highest chrome result has been 0.0042 mg/l and the highest zinc result was 0.020 mg/l. The current permit limits are consistent with the Steam Electric Effluent Guidelines, at 0.2 mg/l for chrome and 1.0 mg/l for zinc. We no longer use cooling tower water treatment chemicals containing chrome and zinc and can certify this on each of the biennial Flow Monitoring and Characterization Studies.

6. A package of information pursuant to 40 CFR 122.21(r)(2), (3) and (5), which address compliance with Clean Water Act Section 316(b) regarding cooling water intake structures. All four Plant Scherer units already employ closed loop condenser cooling water systems and, therefore, have met the applicable performance standards using compliance alternative number one, 125.94(a)(1)(i).

There have been no permit-related changes to this facility since the current permit was issued on January 30, 2002. We request that EPD consider renewing this permit with the same effluent limitations and conditions that are currently applicable in the existing NPDES permit, modified as discussed in item 5 above.

If you need additional information or have questions regarding this matter, please contact Bill Evans at 404-506-7031.

Sincerely,


Charles H. Huling

WRE/
Attachments

xc: Jeffrey H. Larson, Manager, Permitting, Compliance and Enforcement Program

Georgia Department of Natural Resources

2 Martin Luther King, Jr. Drive, S.E., Suite 1152 East Tower, Atlanta, Georgia 30334-9000

Noel Holcomb, Commissioner

Carol A. Couch, Ph.D., Director

Environmental Protection Division

404/656-4713

November 29, 2006

Mr. Charles H. Huling, P.E.
Vice President, Environmental Affairs
Georgia Power Company
Bin No. 10221
241 Ralph McGill Blvd.
Atlanta, Georgia 30308-3374

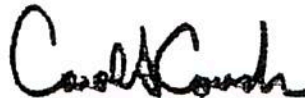
RE: Georgia Power Co. - Plant Scherer
NPDES Permit No. GA0035564

Dear Mr. Huling:

EPD has initiated a basin wide permitting strategy whereby permits are reissued within groups of river basins during specific years. As a part of that process, permits are extended until such time they can be reissued within that basin grouping.

The Environmental Protection Division (EPD) has received your application for reissuance of the referenced permit. EPD is hereby extending your permit until such time that it can be reissued within the appropriate river basin group.

Sincerely,



Carol A. Couch, Ph.D.
Director

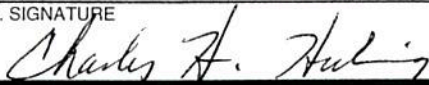
CAC/ TEH

cc :Environmental Protection Agency

cc: Lisa Peacock, EPD Information Management Unit

cc: Gigi Steele, EPD Municipal Permitting Unit

FORM 1 GENERAL		U. S. ENVIRONMENTAL PROTECTION AGENCY GENERAL INFORMATION Consolidated Permits Program (Read the "General Instructions" before starting.)		Form Approved. OMB No. 2040-0086. Approval expires 5-31-92											
I. EPA I.D. NUMBER				F G A D 0 0 0 6 1 2 7 9 6											
LABEL ITEMS				GENERAL INSTRUCTIONS											
I. EPA I.D. NUMBER				If a preprinted label has been provided, affix it in the designated space. Review the information carefully; if any of it is incorrect, cross through it and enter the correct data is absent (the area to the left of the label space list the information that should appear), please provide it in the proper fill-in area(s) below. If the label is complete and correct, you need not complete items I, III, V, and VI (except VI-B which must be completed regardless). Complete all items if no label has been provided. Refer to the instructions for detailed item descriptions and for the legal authorizations under which this data is collected.											
III. FACILITY NAME															
V. FACILITY MAILING ADDRESS															
VI. FACILITY LOCATION															
II. POLLUTANT CHARACTERISTICS				INSTRUCTIONS: Complete A through J to determine whether you need to submit any permit application forms to the EPA. If you answer "yes" to any questions, you must submit this form and the supplemental form listed in the parenthesis following the question. Mark "X" in the box in the third column if the supplemental form is attached. If you answer "no" to each question, you need not submit any of these forms. You may answer "no" if your activity is excluded from permit requirements; see Section C of the instructions. See also, Section D of the instructions for definitions of bold-faced terms.											
SPECIFIC QUESTIONS				MARK "X"			SPECIFIC QUESTIONS				MARK "X"				
				YES	NO	FORM ATTACHED					YES	NO	FORM ATTACHED		
A. Is this facility a publicly owned treatment works which results in a discharge to waters of the U.S. ? (FORM 2A)					X		B. Does or will this facility (either existing or proposed) include a concentrated animal feeding operation or aquatic animal production facility which results in a discharge to waters of the U.S. ? (FORM 2B)					X			
C. Is this a facility which currently results in discharges to waters of the U.S. other than those described in A or B above? (FORM 2C)				X		X	D. Is this a proposed facility (other than those described in A or B above) which will result in a discharge to waters of the U.S. ? (FORM 2D)					X			
E. Does or will this facility treat, store, or dispose of hazardous wastes ? (FORM 3)					X		F. Do you or will you inject at this facility industrial or municipal effluent below the lowermost stratum containing, within one quarter mile of the well bore, underground sources of drinking water? (FORM 4)					X			
G. Do you or will you inject at this facility any produced water or other fluids which are brought to the surface in connection with conventional oil or natural gas production, inject fluids used for enhanced recovery of oil or natural gas, or inject fluids for storage of liquid hydrocarbons? (FORM 4)					X		H. Do you or will you inject at this facility fluids for special processes such as mining of sulfur by the Frasch process, solution mining of minerals, in situ combustion of fossil fuel, or recovery of geothermal energy? (FORM 4)					X			
I. Is this facility a proposed stationary source which is one of the 28 industrial categories listed in the instructions and which will potentially emit 100 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)					X		J. Is this facility a proposed stationary source which is NOT one of the 28 industrial categories listed in the instructions and which will potentially emit 250 tons per year of any air pollutant regulated under the Clean Air Act and may affect or be located in an attainment area? (FORM 5)					X			
III. NAME OF FACILITY															
1 SKIP PLANT SCHERER															
IV. FACILITY CONTACT															
A. NAME & TITLE (last, first, & title)				B. PHONE (area code & no.)											
2 HULING, C. H., VICE PRES., ENVIR. AFFAIRS				404			506			7716					
V. FACILITY MAILING ADDRESS															
A. STREET OR P.O. BOX															
3 241 RALPH MCGILL BLVD., N.E.															
B. CITY OR TOWN				C. STATE		D. ZIP CODE									
4 ATLANTA				GA		30308									
VI. FACILITY LOCATION															
A. STREET, ROUTE NO. OR OTHER SPECIFIC IDENTIFIER															
5 10986 HIGHWAY 87															
B. COUNTY NAME															
MONROE															
C. CITY OR TOWN				D. STATE		E. ZIP CODE		F. COUNTY CODE							
6 JULIETTE				GA		31046		N/A							

VII. SIC CODES (4-digit, in order of priority)																
A. FIRST						B. SECOND										
C	7	15	16	19		C	7	15	16	19						
4911 Generation of electricity						N/A										
C. THIRD						D. FOURTH										
C	7	15	16	19		C	7	15	16	19						
N/A						N/A										
VIII. OPERATOR INFORMATION																
A. NAME										B. Is the name listed in Item VIII-A also the owner?						
C	8	15	16	19		GEORGIA POWER COMPANY						<input checked="" type="checkbox"/> YES <input type="checkbox"/> NO				
C. STATUS OF OPERATOR (Enter the appropriate letter into the answer box; if "Other", specify.)										D. PHONE (area code & no.)						
F = FEDERAL S = STATE P = PRIVATE					M = PUBLIC (other than federal or state) O = OTHER (specify)	P	56	C	A	15	16	18	19	21	22	25
								404	506	6526						
E. STREET OR P.O. BOX																
241 RALPH MCGILL BLVD., N.E.																
F. CITY OR TOWN										G. STATE		H. ZIP CODE		IX. INDIAN LAND		
C	B	15	16	19		ATLANTA		GA		30308		Is the facility located on Indian lands? <input type="checkbox"/> YES <input checked="" type="checkbox"/> NO				
X. EXISTING ENVIRONMENTAL PERMITS																
A. NPDES (Discharges to Surface Water)						D. PSD (Air Emissions from Proposed Sources)										
C	T	I	15	16	17	18	C	T	I	15	16	17	18			
9	N						9	P								
GA0035564						N/A										
B. UIC (Underground Injection of Fluids)						E. OTHER (specify)										
C	T	I	15	16	17	18	C	T	I	15	16	17	18			
9	U						9									
N/A						N/A										
C. RCRA (Hazardous Wastes)						E. OTHER (specify)										
C	T	I	15	16	17	18	C	T	I	15	16	17	18			
9	R						9									
N/A						N/A										
XI. MAP																
Attach to this application a topographic map of the area extending to at least one mile beyond property boundaries. The map must show the outline of the facility, the location of each of its existing and proposed intake and discharge structures, each of its hazardous waste treatment, storage, or disposal facilities, and each well where it injects fluids underground. Include all springs, rivers and other surface water bodies in the map area. See instructions for precise requirements.																
XII. NATURE OF BUSINESS (provide a brief description)																
Generation of electricity through combustion of fossil fuels.																
* Plant Scherer is jointly owned by: Georgia Power Company, Oglethorpe Power Corporation, Municipal Electric Authority of Georgia, Florida Power and Light, Jacksonville Electric Authority, Gulf Power Company, and City of Dalton.																
XIII. CERTIFICATION (see instructions)																
I certify under penalty of law that I have personally examined and am familiar with the information submitted in this application and all attachments and that, based on my inquiry of those persons immediately responsible for obtaining the information contained in the application, I believe that the information is true, accurate and complete. I am aware that there are significant penalties for submitting false information, including the possibility of fine and imprisonment.																
A. NAME & OFFICIAL TITLE (type or print)						B. SIGNATURE				C. DATE SIGNED						
C. H. Huling, Vice Pres., Envir. Affairs										5/23/06						
COMMENTS FOR OFFICIAL USE ONLY																
C	15	16	19													